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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,447	05/06/2004	Kuang-Yu Yen	REAP0029USA	3446

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EXAMINER

TRAN, TRANG U

ART UNIT	PAPER NUMBER
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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	10/709,447		YEN, KUANG-YU	
	Examiner		Art Unit	
	Trang U. Tran		2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 10-12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8, 13 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipate by Vegt (US Patent No. 6,038,433).

In considering claim 1, Vegt discloses all the claimed subject matter, note 1) the claimed scanning a plurality of frequency bands is met by the tuner 1 (Fig. 1, col. 2, lines 16-41), 2) the claimed analyzing each frequency band to determine if the frequency band holds the received signal, if it does: detecting a frequency response of the received signal is met by the narrowband RF filter 8 and the level detector 9 (Fig. 1, col. 2, line 41 to col. 3, line 12), and 3) the claimed detecting a characteristic of a channel according to the frequency response of the received signal; wherein the received signal corresponds to the channel is met by the microprocessor 6 and the demodulator 5 (Fig. 1, col. 2, line 41 to col. 3, line 51).

In considering claim 2, the claimed wherein frequency ranges of the plurality of frequency bands are different is met by the scanning the frequency range (Fig. 1, col. 2, line 41 to col. 3, line 51).

In considering claim 3, the claimed wherein bandwidth of each frequency band is the same is met by the same bandwidth (Fig. 1, col. 2, line 41 to col. 3, line 51).

In considering claim 4, the claimed wherein the characteristic of the channel at least comprises an edge frequency of the channel, a carrier frequency of the channel, and a symbol rate of the channel is met by the microprocessor 6 which determines the frequency at both edges of the channel, calculates the center frequency, the symbol rate and controls the demodulator 5 to try to lock on the channel found (Fig. 1, col. 2, line 41 to col. 3, line 51).

Claims 5-6 are rejected for the same reason as discussed in claims 1-2, respectively.

In considering claim 7, the claimed wherein the tuner further comprises a mixer, and the tuner determines the plurality of scanned frequency bands according to a scan frequency of the mixer is met by the down converter 2 with the oscillator 3 for converting the output signal of the tuner 1 to a baseband (Fig. 1, col. 2, lines 16-41).

In considering claim 8, the claimed wherein the receiver further comprises a control circuit for controlling the scan frequency of the mixer according to the received signal is met by the microprocessor 6 (Fig. 1, col. 2, line 16 to col. 3, line 51).

In considering claim 13, Vegt discloses all the claimed subject matter, note 1) the claimed wherein the channel-parameter detecting unit further comprises: a signal processing module for processing the frequency response of the received signal is met by the demodulator 5 (Fig. 1, col. 2, line 41 to col. 3, line 51), and 2) the claimed a channel-parameter detecting circuit for determining the characteristic of the channel according to the processed frequency response of the received signal is met by the microprocessor 6 which determines the frequency at both edges of the channel,

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calculates the center frequency, the symbol rate and controls the demodulator 5 to try to lock on the channel found (Fig. 1, col. 2, line 41 to col. 3, line 51).

In considering claim 15, the claimed wherein the characteristic of the channel at least comprises an edge frequency of the channel, a carrier frequency of the channel, and a symbol rate of the channel is met by the microprocessor 6 which determines the frequency at both edges of the channel, calculates the center frequency, the symbol rate and controls the demodulator 5 to try to lock on the channel found (Fig. 1, col. 2, line 41 to col. 3, line 51).

In considering claim 16, the claimed wherein the receiver further comprises a channel scan/control circuit for controlling the tuner to scan the plurality of frequency bands in sequence is met by the microprocessor 6 (Fig. 1, col. 2, line 16 to col. 3, line 51).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vegt (US Patent No. 6,038,433) in view of Sugar et al. (US Publication No. 2004/0028123 A1).

In considering claim 9, Vegt discloses all the limitations of the instant invention as discussed in claim 5 above, except for providing the claimed wherein the signal detecting unit further comprises an auto-gain controller for adjusting a signal gain

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of the receiver, and the signal detecting unit detects whether the frequency band holds the received signal according to the signal gain. Sugar et al teach that the AGC block 820 dynamically adjusts the gain of the receiver to optimize the placement of the Rx signal within the dynamic range of the ADC 810 (Figs. 1 and 2, Page 3, [0050]-[0052]). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the AGC block as taught by Sugar et al into Vegt's system in order to process signals that represent activity in the frequency spectrum over a time interval to derive information about the basic characteristics of those signals in order to identify or classify them.

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vegt (US Patent No. 6,038,433) in view of Sakashita et al. (US Patent No. 4,939,789).

In considering claim 14, Vegt discloses all the limitations of the instant invention as discussed in claim 5 above, except for providing the claimed wherein the signal processing module at least comprises: a low-pass filter; and a high-pass filter respectively coupled to the low-pass filter and the channel-parameter detecting circuit. Sakashita et al teach that Fig. 7 shows one example of the arrangement of the intermediate frequency filter 7, in this example, the intermediate frequency filter 7 is a band-pass filter in which a low-pass filter 22 and a high-pass filter 24 are respectively connected to the input and output ends of a broad band amplifier 23 (Fig. 7, col. 6, lines 25-51). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the low-pass filter and high-pass filter as taught by Sakashita et al into Vegt's system in order to provide a signal receiver which can

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receive satellite and terrestrial broadcasting television signals with a simple, low-cost and small-size circuit.

Allowable Subject Matter

6. Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The dependent claim 10 identifies the distinct features: "wherein the spectrum analyzer further comprises: an average unit for averaging the energy magnitudes of the received signal corresponding to the plurality of frequencies; and a magnitude analysis generator for erasing phase of the received signal to acquire the frequency response of the received signal". The closest prior art, Vegt (US Patent No. 6,038,433) and Sakashita et al. (US Patent No. 4,939,789), either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Morisada et al. (US Patent No. 7,080,393 B2) disclose receiver having a preset tuner.

Mano (US Patent No. 6,816,715 B1) discloses wideband receiver and channel scanning method.

Yang (US Patent No. 6,297,858 B1) discloses method and apparatus for detecting video transmissions.

Brandt et al. (US Patent No. 5,621,767) disclose method and device for locking on a carrier signal by providing frequency band into segments for segment signal quality determination and selecting better signal quality segment.

DuBois (US Patent No. 4,896,102) discloses spectrum analyzer.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang U. Tran whose telephone number is (571) 272-7358. The examiner can normally be reached on 8:00 AM - 5:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



January 16, 2007

Trang U. Tran
Primary Examiner
Art Unit 2622